

### REMARKS

The applicant respectfully requests reconsideration in view of the following remarks.

**This is a reissue application so the claims have been amended according to the reissue rules.**

In claim 8, in the last response the undersigned inadvertently did not include the second set of brackets deleting the phrase “especially 20 to 99% by weight”. It is noted that this was deleted in the preliminary amendment filed with the application. In claim 8, the applicant has changed the word “mixtures” in line 1 to the singular form “mixture”. In claim 13, the applicant has changed the word “mixtures” in line 1 to the singular form “mixture”. In claims 14 and 15 the applicant has corrected the dependency. The applicant also deleted the multiple dependencies. These were obvious clerical errors in the claims. The amendments to claims 13-15 are shown in the Appendix.

Support for newly added claims 16 and 19 can be found in the specification at col. 5, lines 11-15. Support for newly added claims 17, 18 and 20 can be found in the original claim 6.

Claims 1-5 and 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combinations of the teachings of JP 60-015460 Suzuki et al.; (Suzuki”), GB 1582743 Bennett et al. which appears to be an equivalent of DE 2818653 (“Bennett”), and GB 2030169 Altermatt et al. (“Altermatt”). The applicant respectfully traverses this rejection.

In the middle of page 4 of the office the Examiner asserted that the invention could be solved by “little kids”. The applicant respectfully disagrees. The correct problem underlying the present invention, however, is given on column 1, lines 6-8 of the applicant’s patent as granted: “It is an object of the present invention to provide navy to black disperse dye mixtures having good application properties”.

The Examiner is arguing that the individual dyes of the present claims are known and that

therefore compositions containing them would have been expected to possess a combination of the properties inherent to the individual dyes.

In order to expedite prosecution the applicant submits two Rule 132 Declarations executed by Adrian Murgatroyd. The applicant has performed comparisons which clearly show that the build-up behavior of inventive dye mixtures is not just a combination of the properties of the individual dyes but is by far superior. The results are given in the enclosed two Declarations, both signed by Adrian Murgatroyd.

The applicant has used the dye of formula (Ia) of the granted patent as dye (I) in both comparisons and as dye (II) the dye of formula (IIa) in one case and the bromine version of the dye of formula (IIIh) in the other case. Further, the applicant has compared both inventive mixtures in ratios of 5:95, 50:50 and 60:40. These limits are given on column 5, lines 11-15 of the granted patent. The applicant believes that these declarations establish unexpected results. For the reasons this rejection should be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 05579-00304-US from which the undersigned is authorized to draw.

Dated: April 29, 2008

Respectfully submitted,

Electronic signature: /Ashley I. Pezzner/  
Ashley I. Pezzner  
Registration No.: 35,646  
CONNOLLY BOVE LODGE & HUTZ LLP  
1007 North Orange Street  
P. O. Box 2207  
Wilmington, Delaware 19899-2207  
(302) 658-9141  
(302) 658-5614 (Fax)  
Attorney for Applicant

Enclosure: Two Declarations (Rule 132)

**APPENDIX**

13. The [mixtures] mixture of claim 1, comprising 1 to 80% by weight of at least one compound of the formula (I) and 20 to 99% by weight of at least one compound of the formula (II), based on total amount of dye.
14. A process for producing the dye preparation of [claim 1]claim 9, in which the individual dyes of the dye mixture [of claim 1] are ground in water in the presence of a dispersant, then mixed and optionally dried or in which the dye mixture [of claim 1] is ground in water in the presence of a dispersant and optionally dried wherein the mixture comprises 1 to 99% by weight of at least one compound of the formula (I) and 1 to 99% by weight of at least one compound of the formula (II), based on total amount of dye.
15. A process for producing the dye preparation of [claim 1]claim 9, in which the individual dyes of the dye mixture [of claim 1] are ground in water in the presence of a dispersant, then mixed and optionally dried or in which the dye mixture of [claim 1] is ground in water in the presence of a dispersant and optionally dried wherein the mixture comprises 1 to 80% by weight of at least one compound of the formula (I) and 20 to 99% by weight of at least one compound of the formula (II), based on total amount of dye.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

.....  
Serial No: 10/613,002  
Filed: July 2, 2003  
Title: DISPERSE AZO DYE MIXTURES  
.....

Art Unit: 1714  
Examiner: Patrick Dennis Niland

Hon. Commissioner of Patents & Trademarks  
Washington, D. C. 20 231

DECLARATION (Rule 132)

Sir:

I, Adrian Murgatroyd from Rossendale, UK, declare: I am a Chemical Engineer and a citizen of the United Kingdom, residing at Wed 9, 65929 Frankfurt am Main, Federal Republic of Germany.

Since completing my studies at the University of Exeter in the United Kingdom, I have been employed as a textile technician by Tootal Limited, Manchester, UK and as a development manager by ICI (subsequently Zeneca), Manchester, UK. The textile activities of Zeneca were taken over by BASF Aktiengesellschaft, Ludwigshafen, Germany, where I worked as a product manager and as a development manager. In October 2000 BASF transferred its activities in the textile dyestuff field to DyStar and since then I have been employed by DyStar Textilfarben GmbH & Co. Deutschland KG in Frankfurt, Germany as a product development manager for disperse dyes.

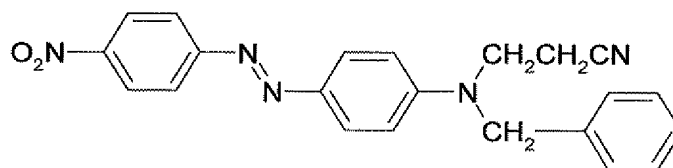
I have had adequate professional experience in the field to which patent application Serial No. 10/613,002, filed July 2, 2003, pertains and which was filed by Manfred Hoppe, Kiyoshi Himeno and Ryouichi Sekioka..

I further declare:

In order to demonstrate that the dyestuff mixtures according to the present application are not obvious over the teachings of the prior art the tests described below have been carried out under my personal guidance and supervision.

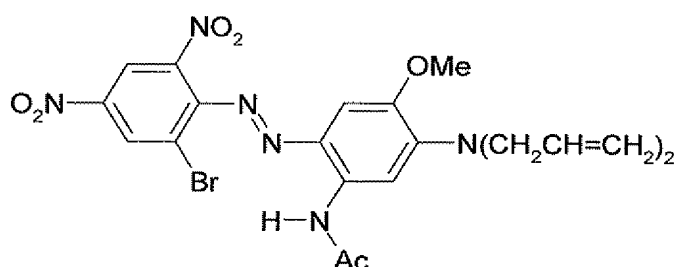
## I. DYESTUFFS AND DYESTUFF MIXTURES

1. Dyestuff 1 of the formula



corresponding to dyestuff of the formula (Ia) of Serial No. 10/613,002

2. Dyestuff 2 of the formula



corresponding to the Br-version of the dyestuff of formula (IIh) of Serial No. 10/613,002

3. Dyestuff Mixture A comprising 5% by weight of Dyestuff 1 and 95% by weight of Dyestuff 2.

4. Dyestuff Mixture B comprising 50% by weight of Dyestuff 1 and 50% by weight of Dyestuff 2.

5. Dyestuff Mixture C comprising 60% by weight of Dyestuff 1 and 40% by weight of Dyestuff 2.

## II. PRODUCING OF THE DYEINGS

Dyeings of each of Dyestuff 1 and 2 and Dyestuff Mixtures A to C were produced using a conventional exhaustion process as follows:

Substrate: 5,0 g of woven Polyester microfibre (MP1)

Liquor ratio: 1:12

pH :	4,5 (acetic acid /sodium acetate)
Levelling agent:	1.0% by weight of Levegal DLP (supplier BASF)
Dispersing agent:	1.0% by weight of Avolan IS (supplier BASF)
Temp. x Time:	130°C x 60 min. (90 -- 130°C: 1,0°C/min.)
Aftertreatment:	Reduction clear

### III. DETERMINATION OF THE BUILD UP PROPERTIES

The color depths of the dyeings obtained according to II above were determined by measuring their remission in the visible range of from 400 to 700 nm and determining their overall remission, INTEG value, which is based on K/S value (Kubelka-Munk function) and described below.

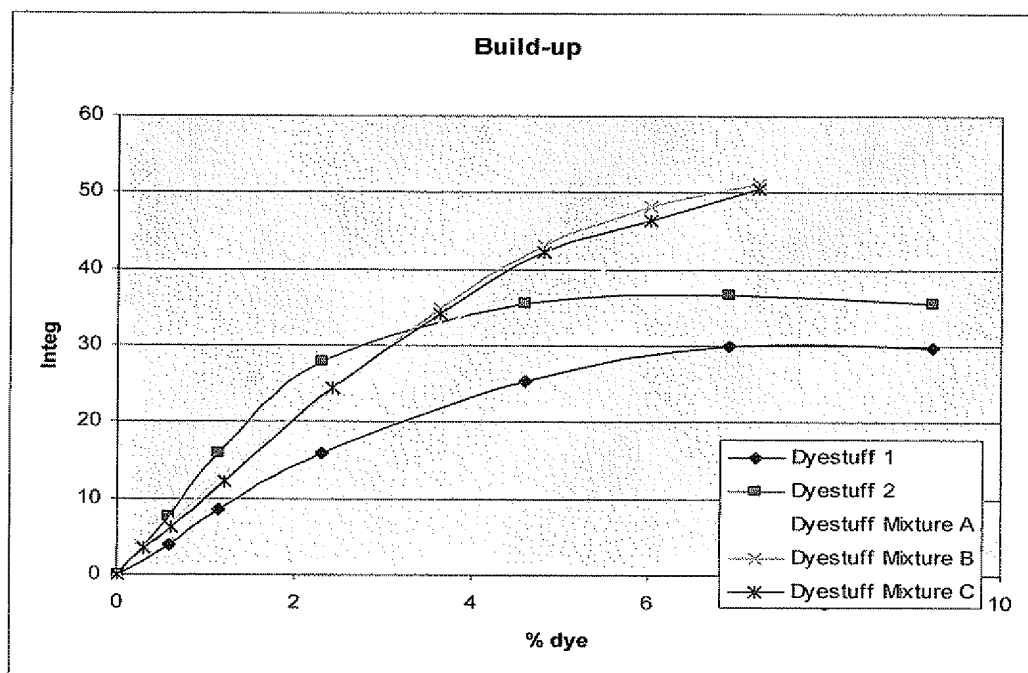
$$\text{INTEG value} = \sum_{\lambda=400}^{\lambda=700} I_{\lambda} \cdot K/S_{\lambda} \cdot (x_{\lambda} + y_{\lambda} + z_{\lambda})$$

$I_{\lambda}$  : the spectral energy distribution of Illuminant

$x_{\lambda}, y_{\lambda}, z_{\lambda}$  : the color-matching functions

### IV. RESULTS

The results obtained are shown on the following the build-up chart:



On a purely mathematical basis, the build-up curves for the Dyestuff Mixtures A to C would be expected to lie in between the curves for the individual Dyestuffs 1 and 2 (which is the behaviour in the initial linear section). However the actual build-up of the mixtures is superior, reaching significantly higher maximum depth of shade than the individual component Dyestuffs 1 and 2. This improvement could not at all be foreseen for a person skilled in the art and was thus unexpected and surprising.

I further declare that I understand the contents of this Declaration, that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Frankfurt

This 28th day of January 2008

.....*A. I. Murgatroyd.*.....  
(Adrian Murgatroyd)



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

.....  
Serial No: 10/613,002  
Filed: July 2, 2003  
Title: DISPERSE AZO DYE MIXTURES  
.....

Art Unit: 1714  
Examiner: Patrick Dennis Niland

Hon. Commissioner of Patents & Trademarks  
Washington, D. C. 20 231

DECLARATION (Rule 132)

Sir:

I, Adrian Murgatroyd from Rossendale, UK, declare: I am a Chemical Engineer and a citizen of the United Kingdom, residing at Wed 9, 65929 Frankfurt am Main, Federal Republic of Germany.

Since completing my studies at the University of Exeter in the United Kingdom, I have been employed as a textile technician by Tootal Limited, Manchester, UK and as a development manager by ICI (subsequently Zeneca), Manchester, UK. The textile activities of Zeneca were taken over by BASF Aktiengesellschaft, Ludwigshafen, Germany, where I worked as a product manager and as a development manager. In October 2000 BASF transferred its activities in the textile dyestuff field to DyStar and since then I have been employed by DyStar Textilfarben GmbH & Co. Deutschland KG in Frankfurt, Germany as a product development manager for disperse dyes.

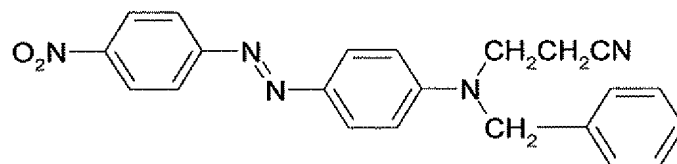
I have had adequate professional experience in the field to which patent application Serial No. 10/613,002, filed July 2, 2003, pertains and which was filed by Manfred Hoppe, Kiyoshi Himeno and Ryouichi Sekioka..

I further declare:

In order to demonstrate that the dyestuff mixtures according to the present application are not obvious over the teachings of the prior art the tests described below have been carried out under my personal guidance and supervision.

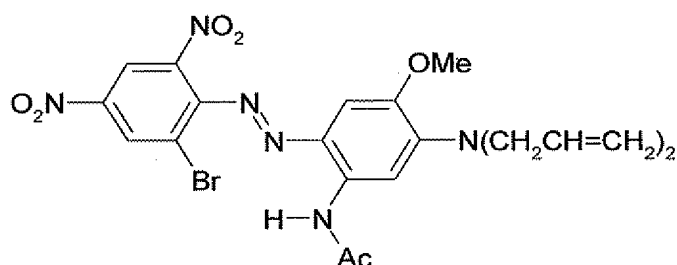
## I. DYESTUFFS AND DYESTUFF MIXTURES

1. Dyestuff 1 of the formula



corresponding to dyestuff of the formula (Ia) of Serial No. 10/613,002

2. Dyestuff 2 of the formula



corresponding to the Br-version of the dyestuff of formula (IIh) of Serial No. 10/613,002

3. Dyestuff Mixture A comprising 5% by weight of Dyestuff 1 and 95% by weight of Dyestuff 2.

4. Dyestuff Mixture B comprising 50% by weight of Dyestuff 1 and 50% by weight of Dyestuff 2.

5. Dyestuff Mixture C comprising 60% by weight of Dyestuff 1 and 40% by weight of Dyestuff 2.

## II. PRODUCING OF THE DYEINGS

Dyeings of each of Dyestuff 1 and 2 and Dyestuff Mixtures A to C were produced using a conventional exhaustion process as follows:

Substrate: 5,0 g of woven Polyester microfibre (MP1)

Liquor ratio: 1:12

pH :	4,5 (acetic acid /sodium acetate)
Levelling agent:	1.0% by weight of Levegal DLP (supplier BASF)
Dispersing agent:	1.0% by weight of Avolan IS (supplier BASF)
Temp. x Time:	130°C x 60 min. (90 -- 130°C: 1,0°C/min.)
Aftertreatment:	Reduction clear

### III. DETERMINATION OF THE BUILD UP PROPERTIES

The color depths of the dyeings obtained according to II above were determined by measuring their remission in the visible range of from 400 to 700 nm and determining their overall remission, INTEG value, which is based on K/S value (Kubelka-Munk function) and described below.

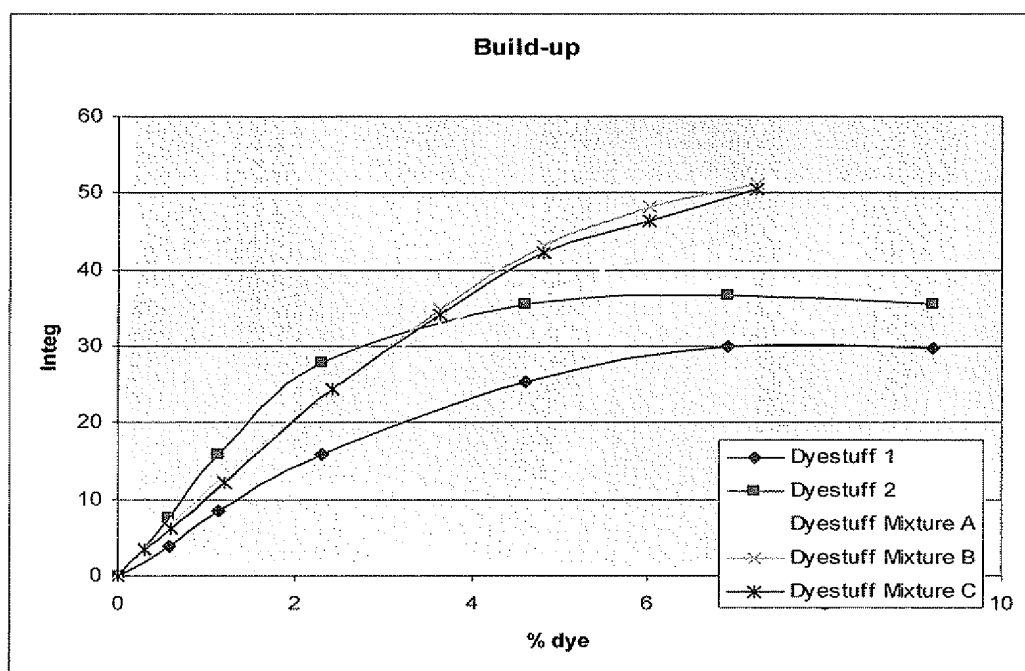
$$\text{INTEG value} = \sum_{\lambda=400}^{\lambda=700} I_{\lambda} \cdot K/S_{\lambda} \cdot (x_{\lambda} + y_{\lambda} + z_{\lambda})$$

$I_{\lambda}$  : the spectral energy distribution of Illuminant

$x_{\lambda}$  ,  $y_{\lambda}$  ,  $z_{\lambda}$  : the color-matching functions

### IV. RESULTS

The results obtained are shown on the following the build-up chart:



On a purely mathematical basis, the build-up curves for the Dyestuff Mixtures A to C would be expected to lie in between the curves for the individual Dyestuffs 1 and 2 (which is the behaviour in the initial linear section). However the actual build-up of the mixtures is superior, reaching significantly higher maximum depth of shade than the individual component Dyestuffs 1 and 2. This improvement could not at all be foreseen for a person skilled in the art and was thus unexpected and surprising.

I further declare that I understand the contents of this Declaration, that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Frankfurt

This *28<sup>th</sup>* day of *January 2008*

.....*A. Murgatroyd*.....  
(Adrian Murgatroyd)